JAMES DOUGLAS ANDREWS, P.E.
Environmental Engineering, Inc.
1320 SOUTH FIFTH STREET
SPRINGFIELD, ILLINOIS 62703
(217) 528-1545

June 15, 1979

Mr. Thomas E. Cavanagh, Jr.
Illinois Environmental Protection Agency
Division of Land/Noise Pollution Control
Land Permit Section
2200 Churchill Road
Springfield, Illinois 62706

re: St. Clair County, IL
East St. Louis/SCA-Milam
Permit No. 1978-23-OP

Dear Mr. Cavanagh:

In compliance with the requirements of the subject permit, Special Condition 8; the undersigned has caused five soil borings to be placed in the Phase II sub-area shown on the attached Drawing No. 74-119A-SB1. Based upon the depth of low permeability clays encountered in the borings, we have set grade stakes and assisted the Site Operator in the placement of compacted clay underliner in a portion of the Phase II sub-area. A minimum depth of ten feet of low permeability clay exists in a portion of the Phase II sub-area as indicated in the attached boring logs.

We hereby certify the presence of a minimum thickness of ten feet of low permeability clay based upon soil borings and the underliner thickness in the shaded area shown on the attached drawing.

Borings 35, 36 and 37 were not extended to the full depth at the request of Messrs. Kenneth Mensing and Perry Mann. Their request was made to allow the observation of water levels in the open boreholes. These boreholes have now been open in excess of ten days and we are requesting that they be re-sealed with compacted clay.

It should be noted here that the 150 foot wide strip being initially placed in the Phase II sub-area is to form a roadway base to reach the southeast corner of Phase II. The construction of the roadway base is expected to take about 30 days. During this period, any additional clay underliner required in the southeast portion will be installed.

Mr. Thomas E. Cavanagh, Jr.

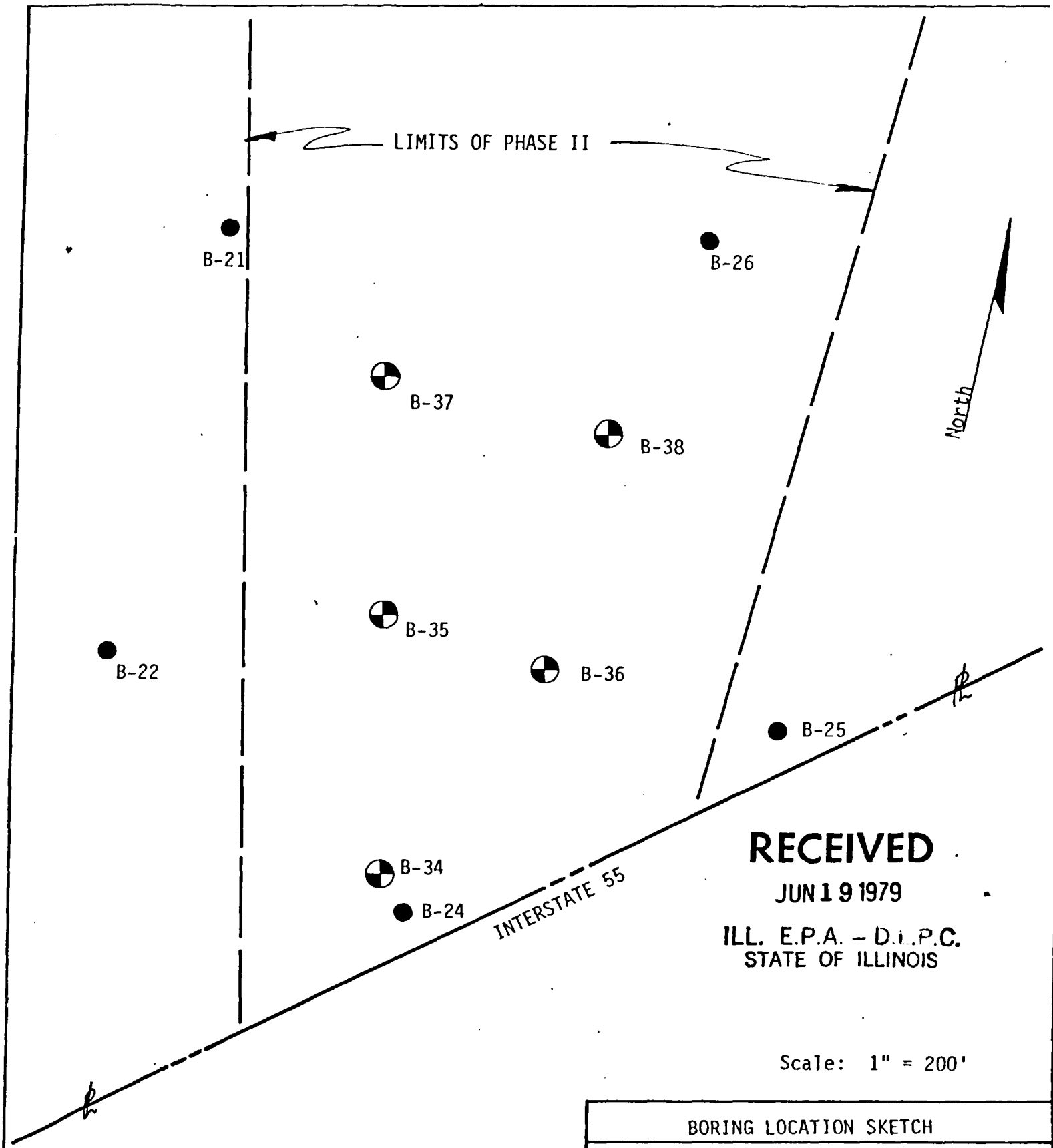
St. Clair County, IL
East St. Louis/SCA-Milam
Permit No. 1978-23-OP

A further certification of the area will be forthcoming.

Sincerely,

James Douglas Andrews, P.E.
Principal Engineer

JDA/rdk:
Enclosures
cc: Kenneth Hartbarger
Kenneth Mensing
Norris Eichler
Dale Dille



Scale: 1" = 200'

● Previous Borings

⊕ New Soil Borings

BORING LOCATION SKETCH

PHASE II
MILAM LANDFILL
ST. CLAIR COUNTY, ILLINOIS

RECORD OF SUBSURFACE EXPLORATION

PROJECT Milan Landfill Phase II BORING 34

JOHN MATHES & ASSOCIATES, INC.

CONTRACT 631-79 DATE DRILLED 6/4/79 DRILLED BY Bignall

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Schaefer

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL	BLOWS	DRY UNIT WEIGHT PCF
				SURFACE ELEVATION		
	1	SS		Dark Gray CLAY -w/Oxidized Stains @ 1.5' -w/Oxidized Spots Below 4.0'	2-1	
5	2	SS		-w/Shells @ 6.5'	1/9"-1/9"	
	3	SS	Hit Water @ 8.5'		1/12"-1	
10	4	SS		Gray Fine SAND	WR-1	
	5	SS	3' Blow in @ 11.5'		5-7	
15	6	SS	1' Blow in @ 14.0'	T.O.B.	8-8	
20						

SHEAR STRENGTH, TSF

SV OP/2 QU

0 0.5 1.0 1.5 2.0

PL + WATER ● CONTENT, %

0 20 40 60 80

GROUND WATER DEPTH AT COMPLETION 3.0' AFTER _____ AFTER _____

RECORD OF SUBSURFACE EXPLORATION

PROJECT Milan Landfill Phase II BORING 35

JOHN MATHES & ASSOCIATES, INC.

LOGGED BY Schaefer

PIEZOMETER None

DRILLING METHOD Hollow Auger

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL SURFACE ELEVATION	BLOWS	DRY UNIT WEIGHT PCF
				Gray CLAY		
	1	SS		-w/Oxidized Spots From 1.5' to 5.5'	2-2	
				-w/Silt Pockets @ 1.5'		
5	2	SS		-w/Oxidized Stains @ 4.0'	1/4"-1/9"	
			Hit Water @ 6.0'	-w/Shells @ 6.0'		
	3	SS			WH-1	
				Gray Fine SAND & SHELLS		
	4	SS		w/Traces of Clay	1/12"	
10				T.O.B.		

SHEAR STRENGTH, TSF

SV △ OP/2 □ QU/2 ○

0 0.5 1.0 1.5 2.0 2.5

PL + WATER ● CONTENT, % + LL

0 20 40 60 80 100

GROUND WATER DEPTH AT COMPLETION 7.8' AFTER _____ _____ AFTER _____ _____

SCALE 1" = 5"

JOHN MATHES & ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

PROJECT Milan Landfill Phase II BORING 36

JOHN MATHES & ASSOCIATES INC.

CONTRACT 631-79 DATE DRILLED 6/5/79 DRILLED BY Bignall

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Schaefer

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL	BLOWS	DRY UNIT WEIGHT PCF
				SURFACE ELEVATION		
	1	SS		Gray CLAY -w/Oxidized Spots From 1.5' to 5.5' -w/Shells @ 1.5' & From 6.0' to 9.5' -w/Organic Matter Below 6.0'	1-1	
5	2	SS			1-1	
	3	SS	Hit Water @ 8.0'		1-1	
	4	SS		Gray Fine SAND	1-1	
10				T.O.B.		

SHEAR STRENGTH, TSF

SV △ QP/2 □ QU ○

0 0.5 1.0 1.5 2.0

PL + WATER ● CONTENT, %

0 20 40 60 80

GROUND WATER DEPTH AT COMPLETION 3.0' AFTER _____ _____ AFTER _____ _____

SCALE 1" = 5'

JOHN MATHES & ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

PROJECT Milan Landfill Phase II BORING 37

JOHN MATHES & ASSOCIATES, INC.

CONTRACT 631-79 DATE DRILLED 6/5/79 DRILLED BY Bignall

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Schaefer

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL	BLOWS	DRY UNIT WEIGHT PCF
				SURFACE ELEVATION		
	1	SS		Gray CLAY -w/Oxidized Spots @ 1.0' & @ 6.0'	1-2	
5	2	SS		-w/Oxidized Stains @ 3.5' -w/Shells @ 6.0'	1-1	
	3	SS	Hit Water @ 8.5'		1-1	
	4	SS		~~Gray Silty CLAY w/Oxidized Spots & Shells~~	1/12"-1	
10				T.O.B.		

SHEAR STRENGTH, TSF

SV ____ QP/2 ____ QU/2

0 0.5 1.0 1.5 2.0 2.5

PL + WATER ● CONTENT, % LL +

0 20 40 60 80 100

GROUND WATER DEPTH AT COMPLETION 8.0' AFTER ____ ____ AFTER ____ ____

RECORD OF SUBSURFACE EXPLORATION

PROJECT Milan Landfill Phase II BORING 38

JOHN MATHES & ASSOCIATES, INC.

CONTRACT 631-79 DATE DRILLED 6/5/79 DRILLED BY Bignall

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Schaefer

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL SURFACE ELEVATION	BLOWS	DRY UNIT WEIGHT PCF
	1	SS		Gray CLAY -w/Oxidized Stains From 1.5' to 5.5'	2-1	
-5-	2	SS		-w/Oxidized Spots & Traces Of Wood @ 4.0' -w/Shells @ 6.5'	1-1	
	3	SS	Hit Water @ 9.5'		1-1	
-10-	4	SS		Gray Silty CLAY -w/Shells @ 11.5'	WH-1	
	5	SS		T.O.B.	WH/18"	
-15-						

SHEAR STRENGTH, TSF
SV — DP/2 — QU/2
0 0.5 1.0 1.5 2.0 2.5

PL + WATER ● CONTENT, % LL +
0 20 40 60 80 100

AT COMPLETION 10.8' AFTER _____ AFTER _____